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A discussion on the various races was presented. Statistics showed that likenesses among groups were about 95%, while differences were only about 5%.

From the biological standpoint, there were no physically inferior or physically superior racial traits. There was no proof that "race" and intelligence were linked. Rather evidence showed that between one ethnic group and another the bilogical endowment for intelligence was much the same; by intelligence was meant the ability to make a successful response to a situation.

In a comparison of Negro and white babies up to their first year, the Negroes, both in physical and psychological development, did as well as the white babies. The Negroes were just as intelligent and as well developed as the white babies. Thus if the environment was equalized for the two groups, the performance, both physically and psychologically, of the members of each group would usually be equalized.

Besides the influence of environment, the use of intelligence tests had the effect of showing differences between ethnic groups. But to apply some intelligence tests to other ethnic groups is unfair; for most intelligent tests are not culturally free or culturally far.

High intelligence was not the monopoly of any one ethnic group. What was often the monopoly of one ethnic group was the control of opportunity in such a manner as to afford its benefits to its own group while excluding other groups from enjoying them. Under such conditions the group that was unfavorably discriminated against did not as well as the group that apportions the major benefits to itself.

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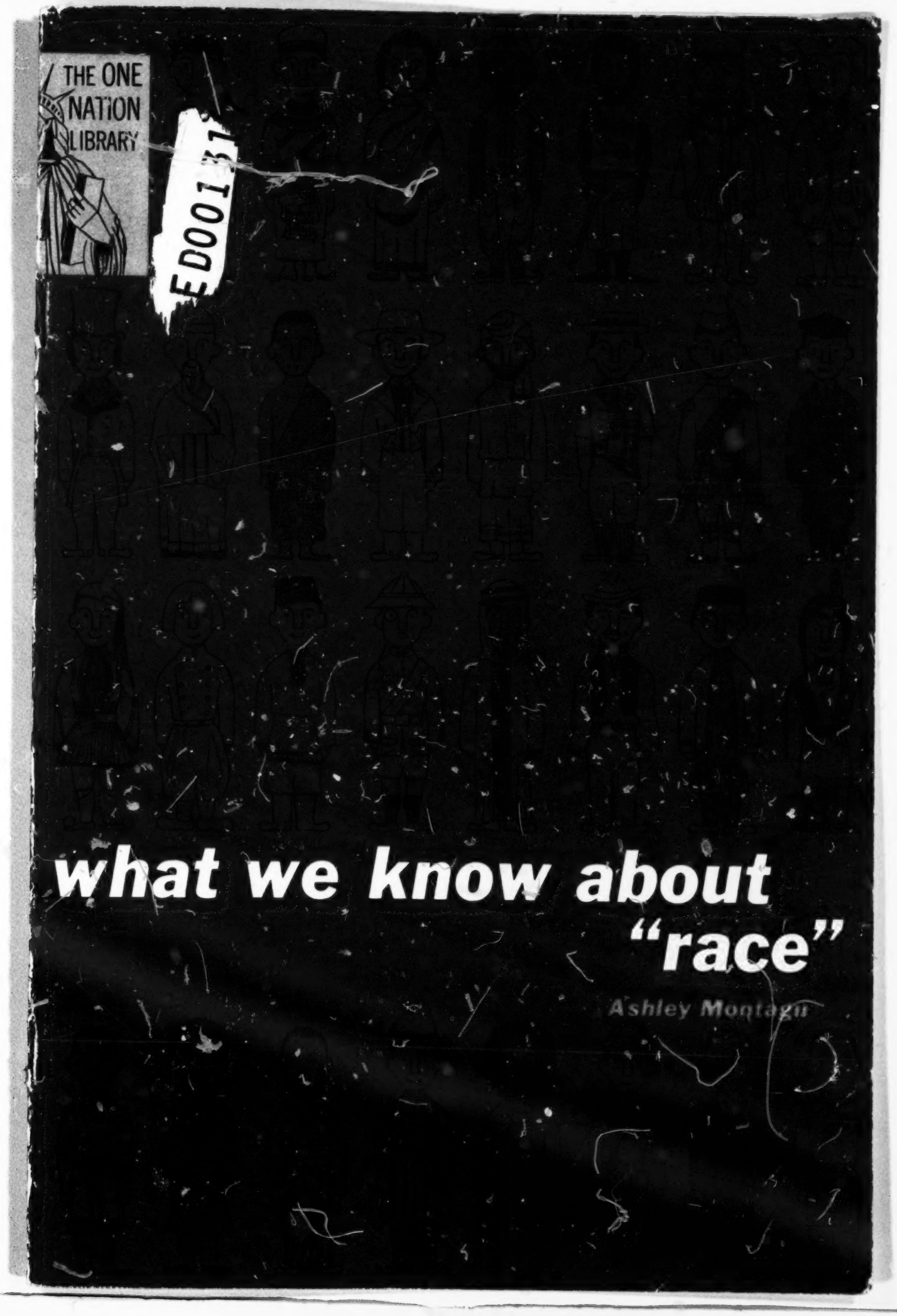

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what we know about "race"

Ashley Montagu

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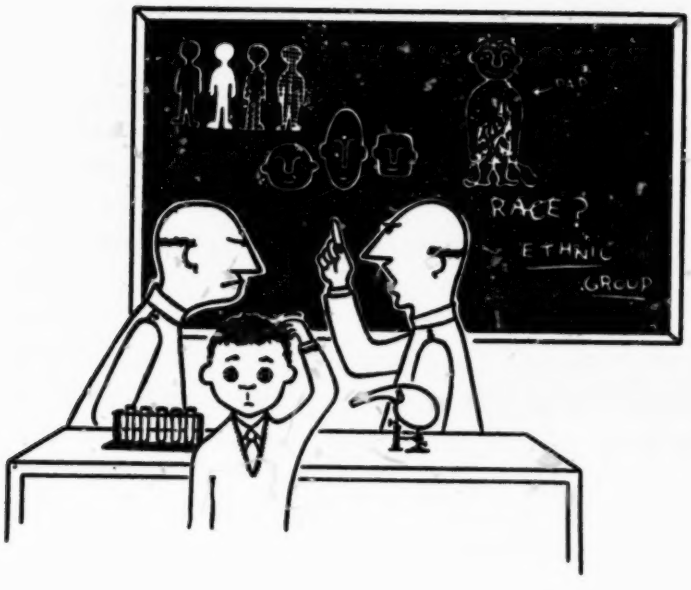
About the Author

Professor Ashley Montagu, an anthropologist, was the executive officer responsible for the drawing up of the famous UNESCO STATEMENT ON RACE in 1951. A leading research worker and writer on the subject of race and on man's evolution, he is the author of more than twenty books and hundreds of technical papers. Among his books are *Coming Into Being Among the Australian Aborigines, Man's Most Dangerous Myth: The Fallacy of Race, Statement on Race, On Being Human, The Biosocial Nature of Man, Introduction to Physical Anthropology, Man: His First Million Years, The Direction of Human Development, Education and Human Relations, The Cultured Man,* and others. He is a member of numerous learned and scientific societies, and is an Honorary Member of the Anthropological Societies of Florence, Italy, and Paris.

From 1929 to 1930, Dr. Montagu was Curator of Physical Anthropology at the Wellcome Historical Medical Museum in London. From 1931 to 1938, he was Assistant Professor of Anatomy in the Graduate School of New York University; from 1938 to 1949, Associate Professor of Anatomy at Hahnemann Medical College and Hospital, Philadelphia; and from 1949 to 1955, Chairman of the Department of Anthropology at Rutgers University. He has been Distinguished Visiting Professor at the University of Delaware, Visiting Lecturer at Harvard University, and has lectured widely throughout America. Among other things, he wrote, directed, and produced the film "One World or None" for the National Committee on Atomic Information. He serves as advisory editor to several scientific journals, is consultant to UNESCO and Chairman of the Anisfield-Wolf Award Committee on Race Relations.



What is "race"? Even scientists are not altogether agreed.

What Is "Race"?

What is "race"? Note that the question is not "What is *a* race," but "What is 'race' "? There is a reason for asking the question in this particular way. For many people, the word "race" is not an idea that they have considered and weighed in the balance of reason; rather, it represents a trigger-word which sets off an emotional response within them. This response makes them mistake their emotions for the Laws of Nature, and for still others, the word possesses a varying number of confused meanings.

There are actually very few people anywhere who have a clear and correct idea as to what "race" or "a race" is. These few people are the scientists who have been studying the subject, and even they are not altogether agreed. There are even biologists who think that the use of the term "race" should be avoided in biology. Some scientists feel that the word "race" has become so confused, so embarrassed and so weighed down by emotional and false meanings that it is beyond rescue, except possibly for strict use by biologists in a biological sense. When people who are not scientific students of the subject desire to talk about what they *think* they mean when they have the idea of "race" in mind, it would be far better for all concerned if they were to use a non-committal term like "ethnic group."

"Ethnic Group" or "Race"?

Confusing words make for confusing thought. In turn, confused thinking makes for confused behavior, and confused behavior can be very dangerous. Therefore, we must be careful in the use of our words. The word "ethnic" is derived from the Greek word *ethnos*, which originally meant a number of people living together, and later came to mean a tribe, people, nation, or a group. The term "ethnic group" is a good one to use instead of "race" for the following reasons: 1) The person using it is likely to know what he is talking about, whereas the person who uses the term "race" is not; 2) It raises a question rather than makes the assumption that everyone understands what is meant by the term "race." The person who hears the term "ethnic group" is likely to ask you what you mean by it, and that at once affords an opportunity for clarification as to the facts and the correction of erroneous notions. The term "ethnic group" serves as a challenge to thought and as a stimulus to rethink the foundation of one's beliefs. Where the term "race" closes the door on understanding, the term "ethnic group" opens it.

What's in a Word?

You often hear people talk about the "American Race," the "English Race," the "French Race," the "Jewish Race," the "Italian Race," the "Irish Race," and so on. None of these groups is a race in the biological sense or any other sense of the word. The Americans, English, French, and Italians represent nations; the Irish come from Ireland, either from Eire which is an independent nation or from Northern Ireland which is still under English rule. The Jews are neither a racial nor a national entity, but persons who adhere to the Jewish religion—Judaism. Israelis are nationals of Israel, they are not necessarily Jews, and they represent many different physical types.

We hear people speak of the "African Race," the "Negro Race," the "Black Race," the "White Race" and the "Yellow Race." Such usages are just as erroneous as those mentioned above. There are no such "races."* There are many different types of colored

* Anthropologists recognize three major groups of mankind, as follows: The Negroid, consisting of the varieties of Negroes; the Mongoloid, of which the most familiar examples are the Japanese and Chinese; and the Caucasoid, consisting of whites and non-white Australian aborigines, the peoples of India, Ceylon, and the Ainu of Hokkaido, Japan.

and white people. There are no yellow-skinned people. Properly speaking, the group referred to is the Mongoloid major group, not a race, but again, a very variable group made up of many different types.

All this would not be so bad if we were merely dealing with a harmless word. But the fact is that "race" is a word which has done, and is still doing, a great deal of harm in the world. Millions of people have been done to death in the name of "race," as Adolph Hitler systematically did not too long ago. Hitler knew what a powerful word this "race" is. He also knew that it was rubbish, but a most valuable kind of rubbish for his purposes. This is what Hitler said to Hermann Rauschning, a colleague of his, "I know perfectly well, just as well as all those tremendously clever intellectuals, that in the scientific sense there is no such thing as race. But you, as a farmer and cattle-breeder, cannot get your breeding successfully achieved without the conception of race. And I, as a politician, need a conception which enables the order which has hitherto existed on historic bases to be abolished and an entirely new and anti-historic order enforced and given an intellectual basis. . . . With the conception of race, National Socialism will carry its revolution abroad and recast the world."*

In 1932, Mussolini declared to the German writer Emil Ludwig, "Race! It is a feeling, not a reality." But in 1939, under the influence of his Axis partner, Adolph Hitler, he completely reversed himself on the subject.

So we perceive that even those who have made the most inhuman use of the idea of "race" were fully aware of the fact that what the word stood for was scientific nonsense. Nevertheless, this word was powerfully useful to them for their political purposes. And so it has usually been.

In many parts of the world, including our own country, millions of human beings are discriminated against and made to suffer in all sorts of ways. The losses to humanity have been and continue to be colossal. The biological losses of genius and the social losses of creativeness that died with the murdered victims of Hitler are incalculable. In much the same way the costs and losses to humanity because of "race" prejudice are immeasurably great. For every time you deprive a man of his full rights to development as a human being you visit an injury upon the whole of humanity.

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* Hermann Rauschning, *The Voice of Destruction.* Putnam, New York, 1940, p. 232.

On the grounds, therefore that when most people use the word "race" it is both confusing and harmful to human beings, we ought to stop using it altogether, and substitute the non-committal term "ethnic group." Of course, by doing this we will not eliminate "race" prejudice. That is not the purpose of outlawing the word "race." The sole purpose of so doing and substituting the term "ethnic group" is to open minds to new ideas and to re-examine old ones, to raise questions rather than to assume that the answers are known. The only secure defense against a new idea is stupidity. Unfortunately, human beings are only too apt to fill the blank spaces in their minds with words in order to conceal their ignorance. As Goethe said, "Where an idea is wanting a word can always be found to take its place." Because that is true, it is a good practice, every so often, to hang a big question mark on the ideas we take most for granted. "Race" is such an idea.

What, then, is the idea of "race" we've talked about so much? What is this idea we've condemned without, in fact, describing it in detail?

The Idea of "Race"

The essence of the idea of "race" that is so widely held is that there is a something called "race" which is the principal determinant of all the important traits of body and soul, of character and personality, of intelligence and ability, and it is this that determines the destiny of human beings and of nations. With this goes the belief that this something called "race" is a fixed and unchangeable part of heredity which, transmitted from generation to generation, automatically unfolds in each people as its "racial" character and being.

This is the "popular" idea of "race." It is an idea which many writers have set out at great length in print and with all the appearance of learning and scholarship. What this idea of "race" says is that there exist different groups of the human species, the so-called "races," and that each group is not only characterized by different physical characteristics which distinguish them from one another, but that with these physical differences are linked mental ones. Therefore, according to this idea, when you see an individual who belongs to a certain "race" you know at once from his physical appearance what his mental traits are like. This view of "race" goes on to assert that some "races" are superior to others,

in the sense that they have higher intelligence and greater abilities. It has also been argued often that the "superior races" have higher moral standards and other surpassing qualities than the so-called "inferior races."

Further, it has often been maintained that not only are there some races that are mentally superior but that there are others that are physically superior, in the sense that they are further removed from the apes than others. And usually, one finds that it is those "races" alleged to be the mentally inferior ones that are said to be "closest to the apes."

The conclusion, of course, of all such arguments is an obvious one. The "superior peoples" of the world must rule the "inferior" ones because the "inferior peoples" just don't have it in them to do as well. Furthermore, intermarriage must not be permitted because this would introduce the "inferiorities" of the "lower races" into the bloodstream of the "higher races" and so drag the "higher races" down and weaken them so that the whole of humanity would be "reduced" to the level of the Hottentot and the Bushman.

Therefore, the argument goes, all the hard-won advances of the "superior races" would be lost, and the achievements and achievers of the high civilizations vanish forever from the earth.

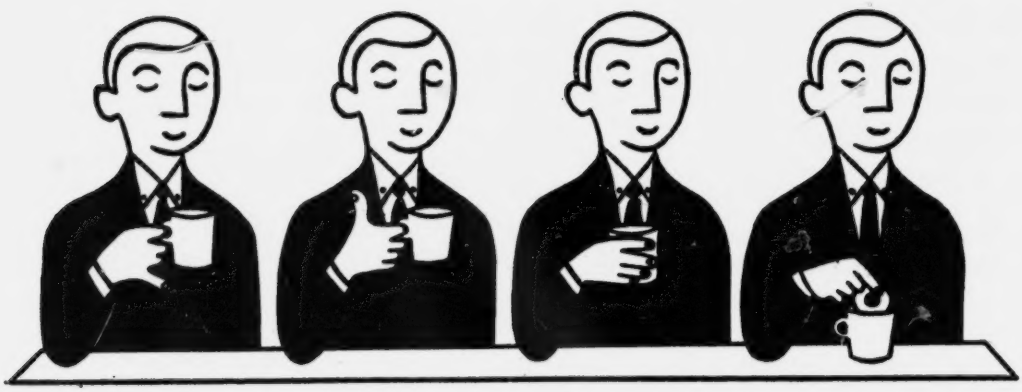
The domestic proponents of this viewpoint, the racists, argue that the United States is particularly endangered by the effects of such "race mixture." They believe the presence of millions of individuals belonging to "inferior races" threatens to render extinct "the type of native American of Colonial descent," as one of these racists, Madison Grant, puts it.

Is there any truth in any of these statements?

Let us consider the facts.

The Physical Differences of Ethnic Groups

There are many ethnic groups; how many no one quite knows. Classifications differ as frequently and as substantially as the classifiers. But however few or many there are they differ from one another physically. However, it is important to add at once that they differ from one another *much less* than they resemble one another. The likenesses between even the superficially most different types of men, say between the average American white and the average Bushman of the Kalahari Desert of South Africa, are far more numerous than the differences. To qualify this statement one



Groups resemble each other much more than they differ; likenesses are about 95%, differences only about 5%.

may say that the likenesses are about 95 per cent, while the differences, at most, are about 5 per cent. In the past we have heard too much about the differences and not enough about the likenesses. This is because differences were the things that were being emphasized rather than likenesses. Yet the very people who emphasized the differences failed to realize that the existence of such minority differences was no argument against the existence of the overwhelming majority of likenesses. Let us always remember that.

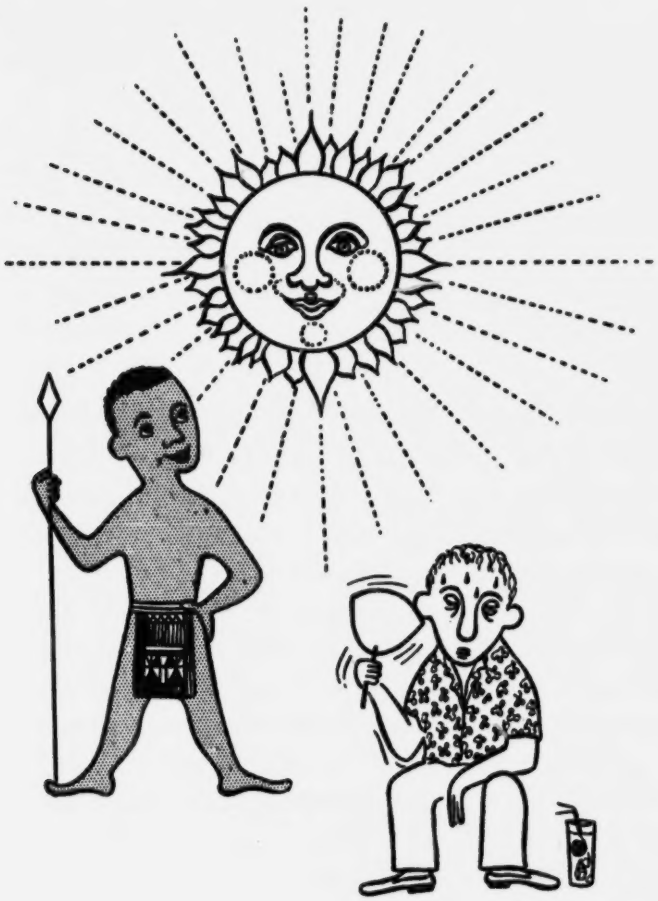
What, then, about the small number of differences? What do they mean? What is their significance?

There are such traits as skin color, hair form, nose shape, and the like. What do they mean? We are not sure. However, on the basis of similar differences in other animal species, scientists have reasoned that the ethnic differences in such physical traits represent the expression of forms of adaptation to environments which best fit the possessors of such traits to such environments. These traits are known as adaptive traits or traits of adaptive value. Their Darwinian fitness or adaptive fitness (as it is variously called) is greater than that of traits which do not fit the organism to the environment as well. Environment acts as a sort of natural selector between such traits, favoring those organisms that possess the necessary adaptive fitnesses for preservation over those that do not possess such adaptive traits. As a result of this process, those possessing the favored traits are likely to leave a larger progeny behind them. This is the process that scientists call *natural selection.*

There is good reason to believe that skin color is an adaptive trait of high selective value, and that the different forms of skin

color represent the hereditary adaptive modifications which took place a long time ago in different environments. Each environment had the effect of eliciting skin color responses in each group, and this adaptive skin color response better fitted the individuals exhibiting it to perpetuate themselves, and so to contribute to the preservation of the group.

Let us see how this actually works. Most scientists are agreed that all human beings, whatever their color, are descended from the same human ancestral stock. This ancestral stock probably came into being somewhere between six hundred thousand and a million years ago, probably in Africa. What the skin color of the ancestral stock was, we don't know. But, since that of the apes is black or dark brown, we may assume that it was dark brown. Apes have a dark hairy coat over most parts of their body as protection against the sun. Man's body hair is sparse. In Africa, man would need a similar kind of protection against the sunlight. Therefore, those individuals possessing dark skin pigment, or able to develop changes in their heredity which gave them more dark



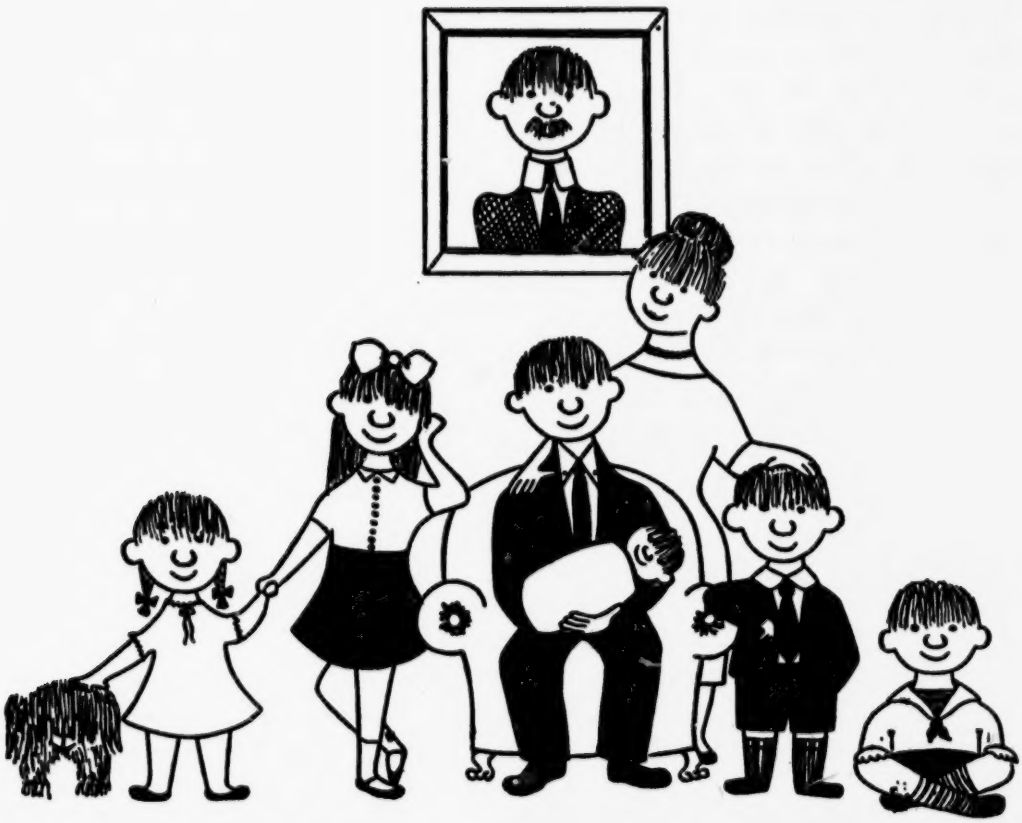
Skin color is believed to be one form of adaptation to environment.

pigment in their skins, would be more likely to survive in such an environment than those individuals who did not possess such hereditary factors. Out of this population, everyone, in the course of time, would come to have a black skin in such an environment.

Our scientists believe that as this population grew some families decided to strike out for themselves. They left their ancestral home to travel far abroad and finally settled a long, long way away from home. Hundreds, thousands of years passed, scores of thousands of years passed, and man's migrations continued all this time. Some of these groups remained together in a geographic area of fair stability in so far as sunlight, temperature and other climatic factors are concerned. Since these early populations as separate and independent groups were very small, seldom consisting of more than a few hundred individuals at most, and since such groups were completely isolated from other groups for considerable periods of time by distance, natural barriers, and other obstacles, any hereditary changes that might have occurred in such groups rapidly affected the population as a whole. This needs some explanation.

By "hereditary changes" scientists mean changes of a permanent kind in the structure of the genetic endowment of the individual. (The genes influence our hereditary characteristics and are contained in the chromosomes which make up part of our germ cells and body cells.) These changes within the genes or chromosomes are transmissible to the offspring of the individual and such permanent hereditary changes are known as *mutations*. Mutations are the raw materials of evolution, for it is upon them that natural selection works.

Supposing, as almost certainly happened, a dark-skinned group migrated into the climate of Northern Europe. In the course of time, individuals with mutations for lighter skin colors would be favored until, by random mating, the mutation changes within the (genes) for lighter skin color would become distributed throughout the population, and we would get the "white" skin. In Africa, where the ultraviolet radiation from the sun is high, it is necessary to have some protective device by means of which this radiation can be cut down. Otherwise, ultraviolet radiation can be very damaging, producing in excess amounts such conditions as serious burns, ulceration, and skin cancers. An increase in the quantity of black pigment (melanin) particles in the skin affords such a protective device. The black pigment serves as an absorbent filter



"Hereditary changes" are permanent changes within the genes or chromosomes which may be transmitted to offspring.

which screens the light and so prevents it from doing any damage. White-skinned persons under the same conditions of sunlight have to take precautions of an artificial kind.

In climates in which the sunlight intensity is low, as in Northern Europe, particularly during those thousands of years when that part of the world was under ice, both human and non-human populations would not require much pigment in their skins. In fact, to such populations it would be an advantage to have relatively small quantities of pigment, because they would need to absorb as much sunlight as they could get, particularly for the production of vitamin D in the skin. Hence, those individuals who had mutations for light skin would be favored.

We can be fairly sure that most, if not all, traits have an adaptive value of similar kind and, by virtue of the fact that they exist in human beings at all, they serve some useful purpose. Hence, there can be no question of superiority or inferiority in so far as such traits are concerned. These traits all evolved in adapta-

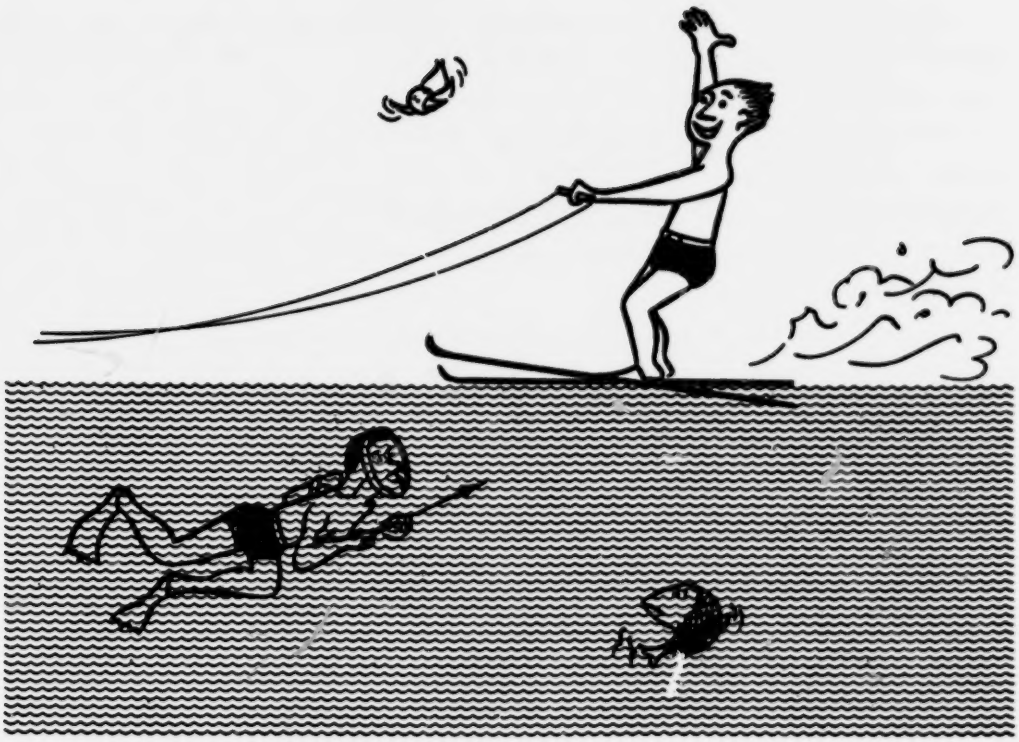
tion to the conditions which they were called upon to meet. In that sense, adaptive traits are all superior, because of their superior quality. But, in fact, the question is not one of superiority or of inferiority but of adaptive value. Is the colored skin of as high adaptive value as the white? The answer is that in areas of high sunlight it is of higher value, in areas of low sunlight it is of lower value. But since man is able to compensate for biological deficiencies by resorting to artificial devices such as white, lightweight clothing in the tropics or warm heavy clothing in the cooler climates, there is no longer much point to asking such questions as which skin is better in which climate? All skins will do equally well in all climates if the proper precautions are taken.

From the biological standpoint, therefore, there are no physically inferior or physically superior racial traits. That should answer the statement that some "races" are characterized by inferior physical traits. Such a statement is simply not true, for, as we have learned, all normal traits have some adaptive value. In relation to the total environment in which man lives, social as well as biological, and worldwide rather than local, the traits of man, no matter what kind they may be, are of about equal weight. By virtue of those very traits which make him human, man is the creature who can adapt himself to all environments. Like many other animals man doesn't have a fur coat, but if he needs one he can get one and put it on in order to keep the cold out. If he needs to go under water, he can take his air with him in a container of some sort. If he needs to go up into the air, he has various means of doing so, and so on. In other words, he has within him an inbuilt system for adjusting his biological traits to the environment and is also able to adjust the environment to suit himself. We'll come to this shortly.

But what about such a trait as the Negro's thick lips and, for that matter, what about his kinky hair, and the difficulty he has in raising a beard? What about his broad nose, long upper extremities, and small ears? Well, what about them? The people who usually ask this question generally have the answer all ready: It is that these traits prove that the Negro is "closer to the apes" than whites. You will recognize this as part of the racist's argument about which we spoke of earlier.

Let us consider the question.

The apes have practically no visible lips, they never have kinky hair, and their bodies are covered with long straight hair.



Man has the ability to adjust himself to his environment.

In these respects the white man is "closer to the apes" than the Negro. In breadth of nose, length of upper extremities, and smallness of ears the Negro is still more like the white man than he is like the ape. But, however all this may be, as you may have guessed, all these traits have nothing to do with being either more or less closely related to the apes. The Negro is as distantly removed from the apes as are all other human beings. What these traits mentioned are, in so far as their form and character are concerned, should be quite clear: They are adaptive traits.

How kinky hair is adaptive or how straight hair is so, we don't know. Nor do we know why in some groups the ears are larger than in others, or why the nose is long and narrow in one group while it is broad and flattish in another. We have lots of conjectures but no definite evidence. Perhaps, it had been suggested, where the moisture is high and the temperature cold, a long narrow nose is a good thing to have because it warms up the air and dries the moisture, whereas in hot climates where the moisture may be low and the air warm, a broad flattish nose is not needed for this function, but can take in the air more directly. But all this is guesswork. We don't pretend to know all the answers—only bigots do.

Perhaps now, you understand a little better than you did before the meaning that lies behind the physical differences which exist between different ethnic groups? Namely, the expression of an extremely interesting history of adaptation to different environments of the species to which we all belong, perhaps a little prematurely named, Man the Wise, *Homo sapiens*. We are all part of a great unity, but we don't have to be uniform to be members of that unity.

There are, then, no ethnic groups that are physically inferior to any other ethnic groups. Is this also true of intelligence?

Again, let us consider the facts.

"Race," Intelligence and Culture

The popular view of "race" has it that "race" and intelligence are linked, that certain types of bodies go with certain types of minds. Is this so? The answer is that in spite of numerous studies and investigations specifically designed to discover whether any such linkage exists, no one has ever been able to demonstrate that they do. It is to be feared, in fact, that many investigators have set out with the firm intention of discovering such linkages. This is, of course, not the scientific way of doing things. A genuine scientist is not interested in setting out to find anything to be either one way or the other. He isn't interested in proving this or that theory. What he is concerned with is in discovering what *is*, in discovering how things actually are, and then stating them, no matter where the chips may fall.

Of course, some people, having set out to find differences, have found them, and then have exclaimed, as it were, "You see. I told you that differences exist!"

But no one has ever denied that differences exist between the ethnic groups of mankind. There are scores of such differences. The real point, however, is whether those differences are "racial" or not. And if not, to what then are such differences due?

Before we go a step further it is necessary to say that no one claims that some differences in intelligence may not exist between different ethnic groups. Such differences may very well exist. It is probable that they do. For no two groups when compared with one another are ever exactly alike in any of the respects in which they are compared; just as no two individuals are ever exactly

alike. But this is a very different thing from saying that ethnic groups differ considerably from one another with respect to intelligence. There is no evidence whatever for such a statement, in spite of many attempts to find that evidence. On the contrary, the evidence that most scientists agree upon indicates that between one ethnic group and another the biological endowment for intelligence is much the same. And by intelligence is meant *the ability to make a successful response to a situation.*

When you compare the intelligence of two people remember that what you are doing is not comparing the native intelligence, the biological endowment for intelligence. Rather, you are comparing the opportunities for the development of that biological endowment as expressed in the intelligence of the two individuals.

Intelligence just doesn't grow of itself. It has to be stimulated, and it is generally stimulated in a particular environment by particular people. Suppose you were born in a small village in a land in which there is great poverty and where the illiteracy rate is high. At your present age you wouldn't be able to read or write. You would probably believe in all sorts of fantastic things, such as that diseases are sent by demons and can be brought on by the evil eye, that flies are created by decaying rubbish, and that the sun travels around the earth. Compared to yourself as you are at the present time, with all the advantages of having been born and brought up and gone to school in the United States, your "village" self would be very stupid, indeed. And yet, the two of you would be one and the same person. Why, then, is your "village" self stupid and your American self intelligent?

The answer is that your "village" self was brought up in one way of life, while your American self was brought up in another, with all the advantages of a high standard of living and the benefits of a highly developed educational system. In short, the *opportunities* for the development of your intelligence would be more favorable in America than they would be in the village, and that is the only reason why your American self would be superior in intelligence to your "village" self. Your biological endowment for intelligence would have been the same, but your social opportunities for the development of that intelligence would have been different, hence, your intelligence would have expressed itself differently.

Suppose you were living in America a hundred years ago on a farmstead, and when you were little you were captured by the Indians, and lived with them for the rest of your life. Do you

think you would have grown up as a white or as an Indian? I can tell you because we know the answer with complete certainty: You would have grown up as an Indian. For this experience actually befell many white children, some of whom were later discovered as adolescents or adults, and quite a number of whom gave their stories to white men who wrote them down. You will find a fascinating account of these stories in a book by Howard H. Peckham, *Captured by Indians* (Rutgers University Press, 1954).

The interesting thing about these white Indians is that after living for years with Indian tribes they were unwilling to return to the white way of life. And, not only did they act like Indians, but it was consistently remarked that they even looked like Indians. This is quite understandable because the face, to a large extent, is an index of the mind, and the thoughts and feelings one habitually indulges in leave a permanent record in the expressions of the face.

The opportunities afforded these white children were to become Indians, and Indians they became. The same would have happened to you or me under similar circumstances.

Recently there was the case of a young American white who had been raised by a Chinese family from infancy in China. This young man had a Chinese look about him, and, indeed, he was Chinese in every way except for his ethnic origin. He even spoke English with a Chinese accent, and he wrote Chinese much more easily than he could write English. Again, the opportunities afforded him for development were according to a particular way of life, in this case Chinese, and so according to that way of life he developed as a "Chinese" gentleman.

There are many ways of life that are different from ours.

Most people in the world sleep on the ground. Hundreds of millions use a piece of wood for a pillow. Millions of others consider milk a disgusting liquid. Millions are unable to read or add. Some groups make clicks when they speak, others whistle, some never wear any clothes, others conceal virtually every concealable part of the body, and so on. Are these traits "racial" or are they due to the ways of life of these peoples? Some have claimed that such traits are racial. It is, in fact, not difficult to show that they are not "racial" at all, but due to the way of life in which each of these peoples have been brought up—as in the case of the white Indians or the "Chinese" gentleman. The way of life is what the anthropologist—the student of man—calls *culture*. The question is: What

is the most important thing in influencing the development of intelligence, "race" or culture?

By applying the test of *opportunity* whenever the matter of the comparative intelligence of persons or of peoples comes up you will find that you have in your power a fine instrument for screening out the factors that are probably responsible for the difference in the intelligence as you observe it. If two individuals who have had virtually the same opportunities for the development of intelligence differ considerably in intelligence from one another, you can be reasonably certain that you are dealing with a difference in the biological endowment for intelligence. If their intelligence is about the same, you can be reasonably certain that their biological endowment for intelligence is similar. But if two individuals have had dissimilar opportunities for the development of intelligence, and display marked differences in intelligence, then, without further investigation, you cannot know to what to attribute the differences in intelligence. Since it is usually found that higher intelligence is associated with greater opportunities for the development of intelligence, this provides a clue to the direction in which such an investigation might most profitably be pursued.

The thing to understand is that there is no intelligence without the stimulation of the environment. Therefore, intelligence is the expression of the interaction between biological endowment and the opportunities afforded by the stimulus of the environment. What people know and do, assuming the general similarity of the biological endowment for intelligence, will largely depend upon the opportunities afforded them by their environment.

People often ask why it is that the Australian aborigines, or the Bushmen of South Africa, or the natives of this or that island in the Pacific haven't attained the high civilizations that the white man has. Surely it must be due to "race"?

The answer is: Because of the differences in the history of their experiences and opportunities.

Once more, let us consider the facts.

History and Achievement

Let us consider the Australian aborigines, especially because they live at a level of cultural development of the most primitive kind. The Australian aborigines are a hunting and food gathering

people. They have no knowledge of agriculture and their only domestic animal is the dog. They have no permanent dwellings, wear no clothes, have no chiefs, and live in small bands of a half dozen families or so who wander over the tribal territory seeking food. They have no writing, no books, no god. Why have they remained at so undeveloped a cultural level while the white man has developed as complex a civilization as he has?

Let us go over a little history. Australia is one of the most southern islands of the world. Upon it the Australian aborigines have lived for we know not how long, cut off and isolated from the main stream of cultural intercourse ever since their arrival in Australia. There the aborigines have lived quite isolated from the world until their discovery in the eighteenth century and the destruction of most of their culture in the nineteenth century.

Except around the coastal fringes, Australia is for the most part a desert country. In such an environment the possibilities of cultural adaptation are limited, particularly since most of the energy of each person in every band must be directed toward the gathering and killing of food, for food as well as water is very difficult to come by. The aborigine's existence is largely determined by the necessity to obtain food, and his economy may best be described as a food-getting economy. In such an inhospitable environment as the Australian interior, it is a marvel that any people could have survived as long as the aborigines. But they have made a wonderful adaptation to their environment and developed all those things that were necessary for them to master the hardships of their existence. They were a happy people, peaceful, full of laughter, gentle and generous, and highly intelligent with respect to their use of their environment. They had not advanced beyond a Stone Age level of cultural development because they had solved all their problems, and were isolated from any stimulus toward change or the necessity for change. And so they might have gone on for thousands of years more, perhaps until the end of time, had they not suddenly been disturbed and overrun by the white man.

The same was true of most isolated peoples.

Consider now the white man. The civilization of the white man came into being in the Middle East, in the region known as the "Fertile Crescent," the general region of Mesopotamia and Palestine. This happened some 6,000 years ago. In this region arose the great civilizations of Ur, Babylonia, Egypt, Israel and Phoenicia. Later, in the whole region of the Mediterranean, high civilizations

like that of Crete, Greece, and Rome came into being. Each of these civilizations cross-fertilized with the others, for their peoples traded with each other and their citizens traveled far and wide to open up new markets and obtain new materials. Thus, their influence eventually spread throughout the whole of Europe and North Africa.

Because of the differences in the history of their experiences and opportunities the Australian aborigines were where they were when discovered by white men in the eighteenth century, and the whites were where they were at the same time. Had the whites lived in Australia and the aborigines in Europe their roles today would be exactly the reverse of what they are, for we know that there is absolutely nothing wrong with the intelligence of the Australian aborigines. In fact, it is very high. Indeed, the school that at one time held the record for scholastic achievement in the South Australian State of Victoria was attended entirely by aboriginal children! But, alas, in Australia the aborigine has been treated even worse than the Negro in America, and has been given hardly any opportunity for development. And yet it is a fact, admitted by many Australian whites, that Australia could never have been settled and opened up without the help and know-how of the aborigines. Such is the gratitude of the white man!

At different times, and at any given time, different peoples are in different stages of cultural development because of the differences in the history of experience which they have undergone. Take, for instance, the English. Everyone knows that the English have produced a very high civilization, indeed. They have given the world Shakespeare, Newton, Shelley, Keats, Bernard Shaw (who was really Irish), and innumerable other great men. Yet, at what cultural stage were the English when the great kingdoms of Babylon and Egypt were flourishing? They were a group of small populations just emerging out of the Stone Age. And several thousand years later, when Caesar landed in Britain in 54 B.C., the Britons were still in an Iron Age stage of culture, illiterate, and regarded as an ignorant and primitive people by the Romans. Fifteen hundred years later the English were the most civilized and most powerful nation in the world.

What had happened? Had there been some fundamental alteration in the biological endowment for intelligence of the English? Almost certainly not. What there had been was a fundamental alteration in the degree to which the English had, during those last

fifteen hundreds years (up to Elizabethan times), been coming into contact with all kinds of foreign peoples, new ideas and experiences. There had been the Norman Conquest in 1066, in addition to the Roman Conquest a thousand years earlier. Christianity had been introduced into England in the 8th century. Men and women from foreign lands had settled in England, and brought with them their new ways, thus contributing to the culture of England. The English themselves ranged the seas far and wide acquiring much knowledge and experience in the process. It is for these reasons then, and for many more of a similar kind, that the English developed culturally. And it is because the Australian aborigines never had this kind of experience, nor the freedom to do what they wished about it, that they never developed beyond the Stone Age.

Evolution and Intelligence

If we ask ourselves what is the most outstanding trait or quality of the human species, of man, the one trait which beyond

Man's outstanding trait is his ability to learn —and to profit by his experiences.

all others distinguishes him from every other living thing on earth, the answer is: his *educability*. Man is the most educable creature, the creature more capable of learning than any other on the face of the earth. This is true of all men. This being the case it should be clear then, that educability has enjoyed high survival value. It is a quality of great adaptive value. Instead of being biologically fixed in his responses to environment like other animals, man has been freed of biological instincts. He is free to make any response he chooses to the environment. Obviously, those who make the most appropriate responses are the ones most likely to live and to leave offspring behind them.

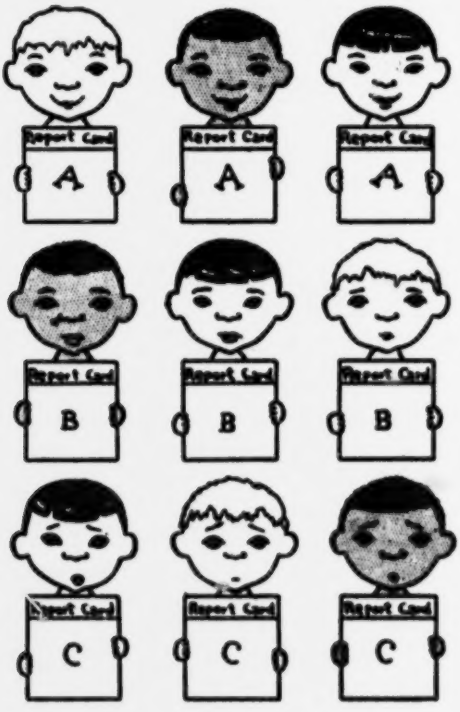
The social environments that human beings have created everywhere are complex. These environments make daily demands of varying and rapid adjustments to the conditions we are called upon to meet. Stereotypic responses, in such cases, simply will not do. Our ability to adjust to such conditions, therefore, occurs chiefly in the mind and has little or nothing to do with our physical traits. The biological fixation of behavioral traits would have been decidedly unfavorable for the survival of man, in the light of the numerous and rapid changes in the human environment since the beginning of human evolution. Success of the individual in most human societies has depended, and continues to depend, on his ability to develop behavior rapidly which best fits the conditions he encounters. He is best off if he submits to some, compromises with some, rebels against some, and escapes from still others. Those who are unable to modify their behavior suffer under most forms of human society and tend to fall by the way. The ability to adapt and, most important of all, *the ability to profit by experience*—intelligence—is required.

In the evolution of man it would seem that it was just these traits that have always been most highly valued: wisdom, the ability to get along, maturity of judgment, adaptability, and above all, educability. These are the traits which would have been favored everywhere, rather than the development of some special response pattern, some special competence, some particular ability or intellectual capacity. For this reason, we would, therefore, expect the mental capacities of humans everywhere to be very much alike, and this is, indeed, what we find to be the case. The evidence and the theory point in the same direction, namely, that there are no really significant differences in intelligence between the ethnic groups of mankind.

Now, let us consider the evidence more directly in the form of the various scientific investigations designed to throw some light on the conditions which produce differences in intelligence not only between different ethnic groups but among members of the same ethnic group.

Heredity and Intelligence

No two human beings are ever identical in their biological endowment for intelligence, with the possible exception of so-called identical twins. We know that there are tremendous differences in intelligence within the ethnic groups with which we are familiar. We also know that many such differences are due to variations in the biological endowment of the individuals—we usually say that they are due to "heredity." By "heredity" we mean that such differences are due to inborn factors. Now, it is all very well to say this when we are certain that the differences are due to inborn factors, that is, to biological endowment. But in that case, we should not use the word "heredity" or "hereditary," because heredity is not something that is limited solely to inborn factors. Inborn factors represent just one aspect—a very important aspect, but still just one aspect—of a complex set of factors of which the inborn ones form only a part. Because this is not clearly understood, much confusion reigns on this matter of the interrelations



Intelligence differs within ethnic groups.

of "race," "heredity," and "intelligence." Let us get ourselves into the clear on this subject.

In school, you may have seen a debate announced or you may even have participated in one on "Which is more important—Heredity or Environment?" A very interesting subject, but actually one that is started off on the wrong foot because the question is falsely posed. Why is it falsely posed? Because it isn't really possible to separate "heredity" and "environment" in the way in which most people think this can be done. "Heredity" isn't one thing and "environment" another. "Heredity" includes the environment. You "inherit" your environment just as much as you inherit your biological endowment. In fact, there can be no biological endowment without an environment. Let us consider this idea a little more in detail.

Earlier, when we spoke about genetic endowment, we explained chromosomes and genes briefly. Here is a more detailed description.

In every one of the cells of your body there are 24 pairs of cell-structures called *chromosomes* (which merely means, "colorable bodies," because in preparing the cell for microscopic study these bodies very rapidly take up the special dyes used to stain them). In the chromosomes, there are tiny chemical packages called *genes*. The genes are the essential hereditary particles which influence (*not* determine—notice that and remember it) the kind of responses that will occur in the development of the various parts of the body and their functions in relation to the environmental conditions under which that development occurs. The reactions of the genes will depend upon their own chemical structure and the kind of environmental stimuli they receive. Hence, the expression of the genes is a function of two things: (1) Biological Structure or Endowment, and (2) Environmental Stimulation.

Since the genes influence development always in relation to an environment that is acting upon them, development of the body and of the mind proceeds (1) according to the limits inherent within the structure of the genes, and (2) according to the nature of the environment in which the genes find themselves. It should be clear, then, that *the same genes may express themselves differently in different environments.* This is the reason why individuals possessing very similar genes for intelligence may nevertheless develop very different degrees of intelligence when they are raised in different environments. This refers to the environment after birth, and by environment we mean anything that can in any way

possibly act upon the individual. But there is an environment which begins to act upon the individual from the moment that he becomes a fertilized egg, and acts upon him throughout the 266½ days which, on the average, the human being spends in the womb before he is born. We call that the prenatal environment (the before-birth environment), and the environment after birth we call the postnatal environment.

As a result of the researches of many scientists, we now know that the developing organism in the womb is capable of being affected by a very large number of different factors, all of which bring about a chemical modification of one sort or another. Insofar as the intelligence of the postnatal individual is concerned, we have good evidence that if the mother's nutrition is inadequate or is lacking in one or more necessary vitamins the children born to her are likely to be of somewhat lower intelligence than the children of those mothers who have had an adequate diet during their pregnancy.

So you can begin to see what "heredity" in relation to "intelligence" really means. For, if you were to give the children of both groups of mothers the same opportunities after birth, the children whose mothers had had an adequate diet would do better than those whose mothers' diet had been inadequate. And, were we unacquainted with the facts about the mothers' pregnancy diets we would tend to conclude that the differences between the two groups of children on their intelligence scores were due to "inborn factors," whereas the truth is, as we know from particular cases, such differences are due to environmental factors which were at work even before these individuals were born.

What the individual is at birth is not the equivalent of his biological or genetic endowment, nor is it the same as his heredity. What an individual is at birth is the result of the interaction between his biological endowment and his prenatal environment. However, that doesn't complete his heredity, for at birth he comes into the inheritance of the postnatal environment, and this, again, serves to influence his development in the most substantial and significant of ways. Whether the child is born into an upper class or a lower class family, whether he has the advantage of a cultured home or lacks those advantages, whether he goes to a good school or an indifferent one, whether he goes on to college or not, whether he has good food or not during his growing period, all these things will not only make the greatest difference in his growth and development, but will also affect his intelligence.

At this point, the important fact to grasp is that heredity is made up of three important components which are completely interwoven with one another to influence what the individual eventually becomes as a person and insofar as his intelligence is concerned. These three important factors are: (1) The Biological or Genetic Endowment, (2) The Prenatal Environment, and (3) The Postnatal Environment.

These are the three factors that comprise everyone's heredity including your own. If you will always remember this it will be a great help to you.

Another thing to remember is that if the biological endowment is so sensitive to the influence of environment, both prenatal and postnatal, then through environment we can influence the expression of heredity. This being so, it should be our duty to provide the best possible environments for everyone, both before they are born and after they are born, so that everyone has an opportunity to develop to whatever extent he is able. As we shall see, by changing the environment in a favorable direction it has been possible to improve the intelligence of human beings who were alleged to be unimprovable. We shall now see what an important role environment plays in influencing the development of intelligence.

Environment and Intelligence

In 1931, a study was made in the South of Negro and white infants in their first year of life. "Baby Tests" were administered to them, and it was found that the white infants did better on the tests than the Negro infants. The investigator immediately concluded that the white infants were naturally superior in intelligence to the Negro infants. Upon inquiry, it turned out that the white infants came from a higher economic and social class than the Negro infants, and the conclusion of the investigator was then challenged.

Even so, not all the white infants were superior on these tests to all the Negro infants. It is important to remember this fact for all such group tests. While these tests are made on individuals they are reported for the group as a whole. In other words, the tests report the *average* performance of the group. This means that there are still many individuals in each of the groups compared who are better than the average, but in reporting averages these individuals tend to be forgotten. But let us return to our infants.

Tests carried out in New Haven in 1946 on Negro and white babies whose mothers had had a balanced diet during pregnancy, and whose parents' social and economic environments were much more alike than was the case in the Southern study, showed that the Negro babies, both in physical and psychological development, did as well as the white babies. There was no difference at all; the Negro babies were just as intelligent and as well developed as the white babies. The suggestion, therefore, is that where the environment is equalized for the groups compared, the performance, both physically and psychologically, of the members of each group will usually be equalized. Again, it must be emphasized that this does not mean that everyone will become alike, but that the *average* of each group, in terms of performance will tend to be similar.

We have not yet finished with "Baby Tests." In studies reported in 1949 and 1951 which were carried out in the Middle West on Negro and white infants, it was found that the Negro infants ranked slightly higher on the intelligence tests than the white infants. Professor A. R. Gilliland, under whose direction these studies were conducted, believes that the Negro infants did better on these tests because in the typical Negro home, with more people living in small quarters, the child receives more social contacts and, therefore, his social-intellectual development is more rapid than that of the white child. This is, of course, a theory, but it is certainly a plausible one. For we know that when some children in any group do not receive adequate social contacts, they do not do as well on intelligence tests as those who have benefited from the social stimulation which seems necessary for healthy mental and physical development.

We know that in America there are a number of ethnic groups that do not live in an environment in which the social-intellectual experiences that they undergo are of a kind that foster an optimum development of mental and physical health. In this connection, one thinks especially of the American Negro.

Is there any place in America where there are not subtle but very definitely felt discriminations against the Negro, not to mention the more substantial discriminations that are practiced every second of the day in our Southern states, and more or less everywhere where Negroes and whites come into social contact? Maybe there are a few spots somewhere. I frankly don't know of any. Certainly, great advances have been made, conditions are much better today for the Negro than they were twenty years ago, but we have still a long way to go to achieve complete equality of rights

for the Negro. And this simply means giving him an equal right to the opportunities for development of his capacities, whatever they may be. This, in turn, means the removal of all discriminations, blocks, and hindrances, which in any way serve to impede his progress. Such rights do not depend upon what we find the physical or psychological status of any group to be. They issue from the ethical principle that all human beings have a right to their birthright, which is development—a point to which we shall return.

Now let us continue with the evidence relating to environment and intelligence.

World War I Tests on Negro and White Recruits

During World War I, the Army carried out intelligence tests on 25,575 Negroes drawn from 23 states and the District of Columbia, and on 55,838 whites drawn from all the states in the Union and the District of Columbia. Tests called *Alpha* were given to those who could read and write, and tests called *Beta* were given to those who could not read and write and to foreigners. It should be noted that less than half as many Negroes were tested as whites, and that they came from fewer than half as many of the states. The findings were very interesting.

Let us deal with the illiterates on the Beta tests first. In general, the whites did better on the Beta tests than the Negroes from the same states. The exceptions were from Kentucky, where the Negroes had a median* score of 17.20 points while the whites from the same state had a median of only 12.30 points, and Ohio, where the Negroes obtained a score of 39.65 while the white Beta score from the same state was 35.45. This score of 39.65 by the Ohio Negroes on the Beta tests was superior to the scores obtained on the same test by the whites of 27 states! The Negroes of Ohio, the illiterate Negroes, did better than the illiterate whites of Kentucky, Virginia, Alabama, North Carolina, Connecticut, New Jersey, Arizona, Florida, Mississippi, New Mexico, West Virginia, Arkansas, Indiana, South Carolina, Tennessee, Louisiana, Ohio, Massachusetts, Maryland, Delaware, Georgia, Pennsylvania, Texas, Oklahoma, Wisconsin, Michigan, and Missouri in the ascending order of their scores; Kentucky being lowest with a score of 12.30 and Missouri ascending to a score of 38.85.

* The median is a form of average representing a set of observations below and above which 50 per cent of the observations occur.

The lowest scores were invariably made by the Negroes from the Southern states, the average of their median scores being 17.58. On the other hand, the Negro recruits from nine Northern states achieved significantly higher scores on the Beta tests than the Negroes from the South, the average of their median Beta scores being 32.72.

The average of the median Beta scores of Negroes from 6 Northern states (Ohio, Kansas, New York, Missouri, Indiana, and Illinois) was 34.63, while that of the whites from 14 Southern states (Kentucky, Virginia, Alabama, North Carolina, Louisiana, Florida, Mississippi, West Virginia, Arkansas, South Carolina, Tennessee, Maryland, Georgia, and Texas) was only 31.11, a difference of 3.52 points in favor of the Negroes.

On the Alpha tests for literates, the results of which may be seen in Table I, the Negroes from Ohio, with a median score of 43.35, did better than the whites of eleven states, all of which happen to be in the South. The Negroes of Illinois, with a score of 42.25, and the Negroes from Indiana, with a score of 41.55 did better than the whites from seven Southern states, while the Negroes from New York, with a score of 38.60, did better than the whites from three Southern states.

Table I

Army Alpha Tests: Negro recruits from four Northern states compared with white recruits from eleven Southern states.

Negroes		Whites	
State	Median Score	State	Median Score
Ohio	45.35	Arkansas	35.60
Illinois	42.25	Mississippi	37.65
Indiana	41.55	North Carolina	38.20
New York	38.60	Georgia	39.35
		Louisiana	41.10
		Alabama	41.35
		Kentucky	41.50
		Oklahoma	43.00
		Texas	43.45
		Tennessee	44.00
		South Carolina	45.05

What do these findings mean? We cannot be certain. Certainty for a scientist is at best simply a high degree of probability attached to a judgment. In such terms, we can say that the evidence suggests that there is probably a significant relationship between the test scores of the recruits and their socio-economic background, and that these test scores reflected environmental history more than they did anything else. We can also suggest that the Negroes from the Northern states who did better than the Negroes and whites from the Southern states, did so not because of any inborn differences among them, but because the social and economic opportunities of the Northern Negroes had been superior to those enjoyed by Southern Negroes and whites.

The probability that this is the correct explanation has been increased by the fact that the scores made on these tests are closely related to the yearly expenditures for education made by the states from which the recruits were drawn, as well as to the per capita income prevailing in those states. The amount spent on education by the states is, among other things, a reflection of the socio-economic conditions prevailing in those states. From the internal evidence of the results of the Alpha and Beta tests, it seems pretty clear that this is what the differences in the test scores were reflecting. Where Negroes enjoyed more favorable socio-conomic conditions than their brethren elsewhere in the United States, the favorable conditions showed up in their higher test scores, and where Negroes enjoyed superior socio-economic advantages to whites, there was a similar difference in their favor in their test scores. Thus, the great importance of the World War I tests is that they bring out as clearly as possible the importance of the environment in influencing the development of intelligence.

Selective Migration and Intelligence

One of the arguments that has been brought against the preceding interpretation of the World War I test results is that the Negroes who did well on the tests represented the upper levels of their people in mental ability, and that Northern Negroes did better than Southern Negroes, and often Southern whites, because there had been a selective migration of superior Negroes from the South to the North. Interestingly enough, no one has argued that Northern whites did better than Southern whites, on the World War I tests, because the more intelligent Southerners move North!

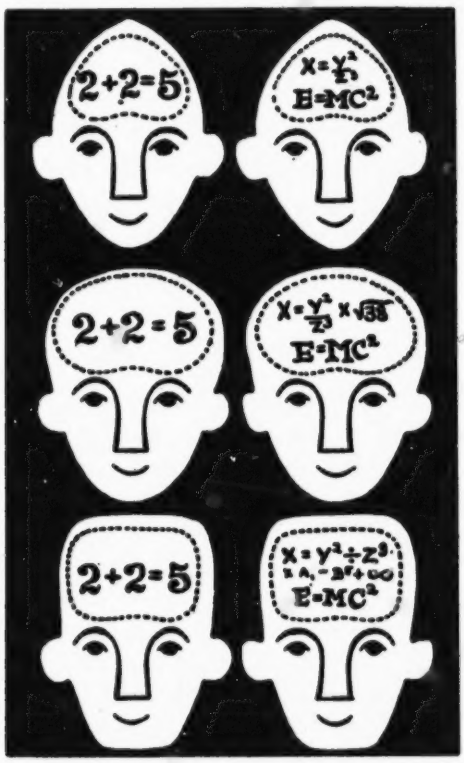
Direct studies made to inquire into this matter do not support the argument of selective migration. The school records of migrants were in no way better than those of non-migrants. On the contrary, it was found that the longer Negro children who had migrated from the South lived in the North, the higher was their intelligence score, although they were not, on the average, as high as those of the average white child. Nevertheless, it was clear that the improvement in intelligence had nothing to do with selective migration but was closely related to the length of time the child had lived in the superior environment.

All sorts of really silly arguments have been resorted to in order to explain away any finding that may be favorable to the "other side." I shall mention only one notorious case of a scientist who, supported by one of our great research institutions, conducted a detailed survey of the characteristics of Negroes and whites on the island of Jamaica. He found, among other things, that "the Blacks seem to do better in simple mental arithmetic and with numerical series than the whites. They also follow better complicated directions for doings things." This rather surprised our interpreter, for the actual investigation was carried out by an assistant of his. In order to explain away this uncomfortable finding, he resorted to the following explanation: A complicated brain, he said, has more numerous nerve tracts in it than a simple brain, and therefore performs the simple numerical problems much less satisfactorily than a brain which is more like a calculating machine, which presumably he was suggesting the Negro brain was. A complicated brain like that of the white man can't be bothered with such simple things as elementary mental arithmetic. *It* is designed for higher things!

This is, of course, all nonsense, and reflects little credit upon persons who must resort to such devices in the face of the facts. In spite of innumerable attempts to find differences in the physical structure of the brains of Negroes as compared with the brains of whites, no one has ever found the least difference. Many claims have been made that such differences existed, but upon investigation it has invariably been found that there was nothing to these claims. There isn't a single external or microscopic structure which is to be found in the brains of one ethnic group that is not to be found in every normal brain of every other ethnic group.

The average size of the brain differs among the ethnic groups of man, but these slight differences in average brain size and weight

have nothing whatever to do with cultural achievement or intelligence. This is demonstrated by the fact that some ethnic groups with brains that are, on the average, larger than those of other ethnic groups, are nevertheless not as highly developed culturally as those other groups. For example, the Amahosa of Africa with a brain volume of 1,490 c.c., the Buriats of Siberia with 1,496 c.c., and the Eskimos with 1,563 c.c., have a larger average brain volume than the average white with a brain volume of between 1,400 and 1,450 c.c. The Iroquois Indians have a brain volume of 1,519 c.c., the Koreans 1,490 c.c., Algonquin Indians 1,532 c.c. American Negroes have an average brain volume of between 1,350 and 1,400 c.c., about 50 c.c. less, on the average, than the white. Are we then to say that the Negro is 50 c.c., less intelligent than the white? That would be both absurd and untrue. By the same token, we would have to say that the Eskimo is 113 c.c. more intelligent than the white, and that the Amahosa of Africa are 40 c.c. more intelligent than whites! This is, of course, all nonsense.



Intelligence is not dependent upon the size or weight of the brain, or its shape, or the form or size of the forehead, or the shape of the head.

Intelligence is not dependent upon the size or weight of the brain, or its shape, or the form or size of the forehead, or the shape of the head. Whatever it is dependent upon has no relation whatever to any of these things. Whatever the physical or struc-

tural basis for intelligence may be, all ethnic groups possess these physical or structural bases in the brains of their members. As we have already had good reason to see, what really influences the development and expression of intelligence is environment. Given the structural basis for intelligence, what is necessary for its development is the stimulation afforded by the environment and, as the environment will differ, so will the development and expression of intelligence. It is the environment which develops "brains." It is not the brain itself that develops brains. Once an individual's "brain" has developed, in other words, once that brain has developed intelligence, that individual's brain can go on to help develop other people's brains, but always through the medium of the environment. (Indeed, your brain, in the form of intelligence, constitutes an important part of the environment of the brain it is helping to develop. By the environmental stimulus you provide, you stimulate the brains of others.) In short, brains simply represent storehouses of human potentialities. What those potentialities require for development is the ordered and patterned stimulation by the environment which is manipulated by instructors, who have themselves similarly undergone such stimulation or social experience according to the pattern provided in the environment in which they were themselves reared.

Hence, what you are, what any human being is going to be like will largely depend upon the socio-economic environment in which he is reared. This appears to be the principal reason why ethnic groups differ from one another in their many cultural characteristics. Were we to equalize the way of life of all peoples and raise every child in much the same way, there can be small doubt that most, if not all, ethnic group differences would disappear. At least, this is what we think would be likely to happen.

Again, let us consider the evidence.

Socio-Economic Conditions and Intelligence of Ethnic Groups

When we apply our intelligence tests to other ethnic groups we are being most unfair to them, because these intelligence tests were designed to test *our* intelligence, *not* theirs. Our intelligence tests test what we are familiar with, the kinds of things we have learned from our environment and that we have acquired during our school days. Other ethnic groups have usually not had this experience in quite the same way, if at all. Therefore, it is unfair

to expect them to do as well on intelligence tests as whites in the cultures in which their environmental experience is dissimilar. This is a matter which has sometimes been disregarded by some intelligence testers, with some very unfair and wrongheaded conclusions resulting. How unfair and how wrongheaded you may judge from the following case histories.

It has long been known that American Indians do poorly on intelligence tests. It was, therefore, concluded by some that American Indians are not as bright as whites. The overall average Indian I.Q. (Intelligence Quotient)* is 80. The corresponding average for American whites would be between 90 and 109. From what we are about to learn you will readily see that the I.Q. does not measure innate intelligence alone, but the influence of the environment upon the genetic endowment for intelligence. It was found, for example, that when Indian children were raised in white foster homes their I.Q. rose to an average of 102, a gain of 42 points! The average I.Q. of brothers and sisters of these children who were still living on the reservation was only 87.5.

In another study made of the Osage Indians in Oklahoma, the Indian children obtained a score of 104 while the average of the white children on the same test (the Goodenough "Draw-a-Man" test), was 103. On still another test involving language, the Indian children scored an average I.Q. of 100 while the white children's average was 98. The differences are not significant. What *is* significant is that these Indian children were living under socio-economic conditions that were quite similar to those under which the white children with whom they were being compared were living. As a result of the fortunate find of oil on their reservation, the Indians have achieved a fairly well-to-do status, and have been able to afford their children opportunities far above those attainable by most other Indian communities. No selective migration was involved here, for the oil was found long *after* the Indians

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* The Intelligence Quotient or I.Q., is the number indicating a person's level of intelligence. It is the mental age, as shown by intelligence tests, multiplied by a 100 and divided by the chronological age, thus:

$$\text{I.Q.} = \frac{\text{mental age} \times 100}{\text{chronological age}}$$

Mental age is the age which the individual achieves on an intelligence test. Chronological age is the individual's actual age. Suppose a boy is 15 years old chronologically, but on the intelligence test he ranks a mental age of 12, we multiply 12 by 100 and divide by 15, which gives us an I.Q. of 80.

were settled on the reservation, but what *was* involved was a favorable change in socio-economic opportunities. With this favorable change in socio-economic opportunities, the I.Q. rose.

Such studies underscore the important fact that it is not sound to draw conclusions as to innate intelligence when comparing different individuals or groups whose environments, particularly their socio-economic environments, have been different. Legitimate conclusions about the inborn intelligence of individuals or groups can be drawn only, and even then with difficulty, when their socio-economic and other environments have been much the same. No two individuals ever experience quite the same environment even if they are identical twins and live in the same house. So that one expects even identical twins to show some differences not only mentally but even physically, which, indeed, they do.

Some people think that when the environment, socio-economic and otherwise, is equalized for all people in all ethnic groups that everyone will become about equal in ability and intelligence. This is quite the reverse of what would, in fact, occur. Equality of opportunity for development would bring out the differences as well as the likenesses and there would be a far greater possibility for the realization of each individual's uniqueness than there is at the present time for all but a few persons.

Remember, that what we have been discussing most of the time in these pages has been the *average* performance of members of different ethnic groups on intelligence tests. Nothing thus far has been said about the numerous individuals who rank far above the average on those tests, individuals who are to be found in every ethnic group. Remember, too, that every ethnic group is made up of individuals, and that it is the individual's needs that we must always consider. The principal need of every baby that is born is the need to develop, to develop its potentialities for becoming a healthy human being.

And what is a healthy human being? Most authorities who have spent their lives studying the facts are inclined to agree with the conclusion that a healthy human being is one who is able to love and able to work. In order to grow and develop as a healthy human being, one needs an environment in which one receives an adequate amount of love and the stimulation which enables one to improve one's self in a healthy direction. The more we deprive individuals of such environments, the more we damage them in their capacity to develop as fully as they would otherwise have

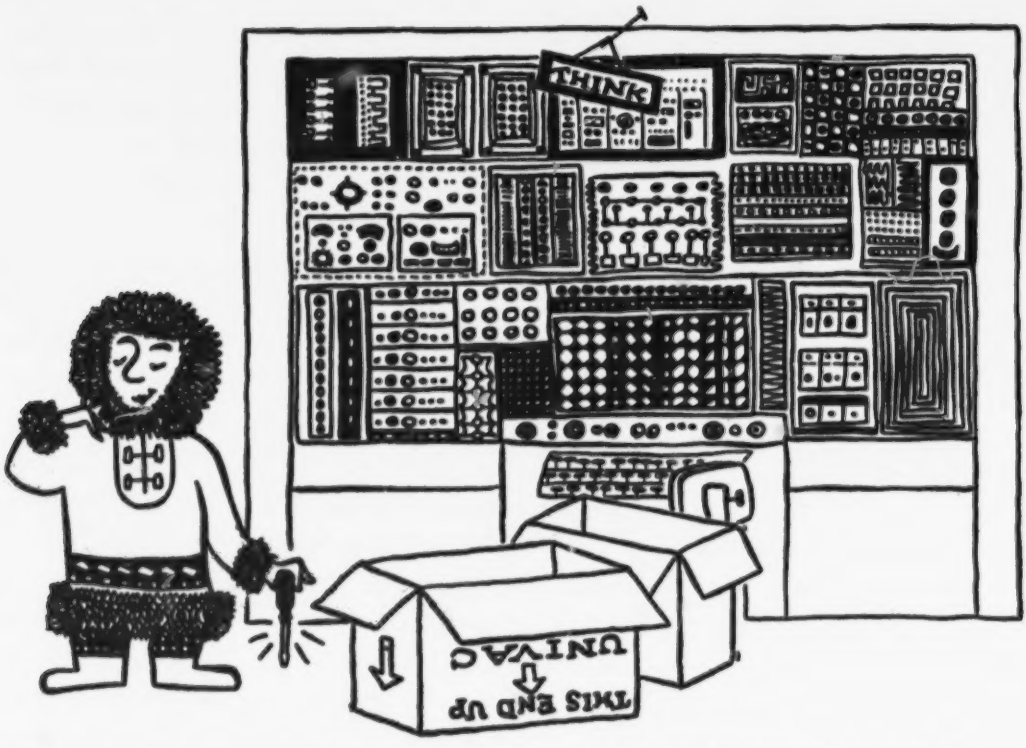
done. And this is what "race" prejudice, and all that goes with it, does to millions of human beings. It cripples them in their development, thus depriving them of their birthright which, as I have already said, is the opportunity for development. If we are to have a healthy society there can be no room for "race" prejudice of any kind in it. But to return, once more, to the individual. Because those of high intelligence are at least as important to any society as are those of average intelligence, let us consider some of the facts about high intelligence among the members of different ethnic groups.

High Intelligence in Different Ethnic Groups

Anthropologists working in the field have often been greatly impressed with the high intelligence and critical acumen of individuals among so-called "primitive peoples" (the anthropologist prefers to call them *non-literate peoples*, because they are not really primitive and are more correctly characterized by the fact that they do not have a written tradition and neither write nor read). I have already referred to the Australian aboriginal school at Ramahyuck, in Victoria, which "stood for three consecutive years the highest of all the state schools of the colony in examination results, *obtaining one hundred per cent of marks*." Also in Australia some years ago, Jacob Harris, a pure Australian aboriginal, defeated the checkers champion of both New South Wales and Western Australia, to become champion himself, being subsequently defeated in turn by the champion of Victoria. Harris had learned the game at the mission station by watching others play and was entirely self-instructed.

These things are evidences of high intelligence in terms that we understand. But in terms that we don't understand as clearly, in the native's own terms, the members of non-literate societies exhibit feats of intelligence which seem to us to border on the miraculous. For example, the ability of non-literates to reconstruct the passage of events from small signs which entirely escape the untutored white man and which enable the non-literate to follow the track of an animal or a man with unerring accuracy. Another example is the extraordinary ingenuity displayed in the solving of difficult problems such as the astonishing ability of the Eskimos to solve difficult mechanical problems particularly in complex machines they have never before seen.

Of the Aivilik Eskimo of Southampton Island in Northwestern Hudson Bay, Professor Edmund Carpenter tells us that they have not only an extraordinary sense of space which enables them to judge distances to within a few units of the distance involved, but that they also have an amazing mechanical ability. "They delight in stripping down and reassembling engines, watches, all machinery. I have watched them repair instruments which American mechanics, flown into the Arctic for this purpose, have abandoned in despair. Working with the simplest tools, often handmade, they make replacements of metal and ivory. Towtoongie made a hinge for me, so small I had to hold it directly before my eyes to see how it worked. Omowyak took a driving shaft from a large engine and, finding it too large for his own engine, reduced the diameter by a third, in the most ingenious manner, with only simple hand tools. No engine is beyond repair.



Outstanding mechanical ability and high intelligence have been demonstrated by so-called "primitive peoples."

"One day I was asked by a missionary to look at a complex machine of his that had stopped working. I removed the top plate and realized at a glance it was far too intricate for me to repair

or even to understand. As I hesitated, an Aivilik who had been watching, slipped his hand under my arm, made a few quick adjustments, and it was fixed."

Aborigines of Australian extraction have also been credited with great mechanical aptitude. Natives of New Guinea discovered the principle of the cantilever and built cantilever bridges probably long before the white man. The astonishing astronomical maritime charts drawn up by the Polynesians, and their long voyages, often of as much as 2,000 miles are now a matter of history and enduring testimony to the high intelligence of a Pacific ethnic group. The acuteness of mind of many individuals in many different African tribes has been recorded by many independent observers.

Of all non-white ethnic groups, the American Negro has been most subjected to intelligence tests, and it is among American Negroes that some of the highest intelligence scores ever recorded have been achieved. For example, there is the case of a nine-year old Negro girl who obtained an Intelligent Quotient of 200, which means that she had the intelligence of, or did as well on the test as, the average girl of 18 years. This girl's mother was a school-teacher and her father a university graduate, and her socio-economic environment was pretty favorable. An I.Q. of 200 is a very rare achievement, less than 1 per cent of the American population ever achieves 130 or over. Today there are more than a dozen studies reporting on groups of Negro school children with I.Q.'s ranging from 120 to over 160.

High intelligence is not the monopoly of any one ethnic group. What *is* often the monopoly of one ethnic group is the control of opportunity in such a manner as to afford its benefits to its own group while excluding other groups from enjoying them. Under such conditions it should not be surprising if the group that is unfavorably discriminated against doesn't show up as well as the group that apportions the major benefits to itself.

It is now well known that not only can a favorable environment raise the intelligence by many points, but also that an unfavorable environment can cause the intelligence to be depressed and even substantially lowered. But with the improvement of the environment the intelligence will improve.

And so we see that it is not "race" that determines intelligence. Since the genetic endowment for intelligence is basically similar in all ethnic groups, the environment must be held to be the domi-

nant factor in influencing the development and expression of intelligence. All we need do to test this conclusion is to give all individuals the necessary opportunities to develop and express their intelligence. Since this is their birthright, their political and their human right, what we *ought* to do we *should* do, and by the grace that is within us, we may.

Finally, let this be said: the facts about "race," intelligence, and environment are helpful and important in enabling us to understand the human condition a little more clearly. But what is really important to understand is that the idea of equality in no way depends upon these facts. The idea of equality, equality of opportunity and equality of rights, does not depend upon the idea that human beings are of equal biological endowment. Rather, that idea depends upon the ethical principle that every man by virtue of the fact that he is human is therefore entitled to all the rights and privileges that go with being human, and the greatest of these rights is the right to development. That is the long and the short of it.

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Books

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The history, contributions and present problems of religious, ethnic and racial groups in America.

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This is the work in which the superior traits of Negroes are ineffectually and ridiculously "explained away" by Dr. Davenport. Dr. Steggerda dissociated himself from such "explanations." p. 34.

MAN'S MOST DANGEROUS MYTH: THE FALLACY OF RACE, 3d ed. Montagu, Ashley. N. Y.: Harper & Brothers, 1952.

For a general discussion of the myth of "race," and for material on the Australian and other aborigines. p. 40.

STATEMENT ON RACE, 2d ed. Montagu, Ashley. N. Y.: Abelard Schuman, 1952.

An extended discussion in plain language of the UNESCO statement by experts on race problems.

THE NEGRO IN AMERICA. Rose, Arnold. N. Y.: Beacon Press, 1948.

Chapter 2—Race: Belief and Facts
Chapter 13—Social Segregation and Its Effects
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For material on intelligence tests, especially that relating to American Indians and Negroes, this is an excellent source. p. 37.

Pamphlets

RACE AND PSYCHOLOGY. Klineberg, Otto. UNESCO, 1951.

Provides evidence that there are no inherent racial differences in intelligence, and that differences are due to environment and opportunity.

RESEARCH REPORT BULLETIN—The Intelligence of the American Negro. North, Robert D. N. Y.: ADL, 1956.

Evidence is presented which reaffirms the conclusion that intelligence is not based on racial differences.

PREJUDICED—HOW DO PEOPLE GET THAT WAY? Van Til, William. N. Y.: ADL, 1957. Teacher guide.

Illustrated text provides easy reading on a complex subject. Guide gives suggestions for additional learning activities.

WHAT IS RACE? UNESCO.

Illustrates and distinguishes facts from fallacies.

Articles

"Space Concepts of the Aivilik Eskimos." Carpenter, Edmund. EXPLORATIONS FIVE, University of Toronto, 1955. pp. 131-145.

This is the important article that tells us about the remarkable mechanical and other aptitudes of the Aivilik Eskimo.

Suggested Reading

Books

TEACHING AND LEARNING THE DEMOCRATIC WAY. Noar, Gertrude. N. J.: Prentice Hall, 1963.

The director of ADL's National Department of Education deals skillfully with the educator's role in promoting healthy intergroup relations.

RACE AWARENESS IN YOUNG CHILDREN. Goodman, Mary E. N. Y.: Collier Books, 1964.

A study of nursery school children – what they think and feel about race and how they learned it.

THEY AND WE. Rose, Peter I. N.Y.: Random House, 1964.

A synopsis of some of the principal aspects of racial and ethnic relations in the United States.

Pamphlets

BEHIND THE HEADLINES. N.Y.: ADL, 1959.

Outlines a special technique for studying intergroup relations through a more meaningful use of the newspapers.

THE DESEGREGATION OF SOUTHERN SCHOOLS–A PSYCHIATRIC STUDY. Coles, Robert. N.Y. and Atlanta: ADL and SRC, 1963.

The record of a research project that successfully documents the effect of school desegregation on young Negro and white children in the Deep South.

RACE AND INTELLIGENCE. Tumin, Melvin M. (ed.). N.Y.: ADL, 1963.

Four distinguished social scientists examine in detail the fallacious charge that Negroes have a lower native intelligence than whites.

PREJUDICE AND DISCRIMINATION. Noar, Gertrude. N.Y.: ADL, 1955.

A resource unit that supplies the teacher with subject outline, learning activities, list of audio-visual aids and an extensive bibliography.

ON RECOGNIZING THE HUMAN SPECIES. Courlander, Harold. N.Y.: ADL, 1960.

This pamphlet illustrates the fact that superficial social differences cannot disguise the basic similarities of man's customs throughout the world.

Records

JOHN BROWN'S BODY. ADL. 43 minute long-playing disc; original music by George Kleinsinger, with the CBS Concert Orchestra.

Original soundtrack recording of the ADL and CBS-TV adaptation of Steven Vincent Benet's Pulitzer Prize-winning poem of the Civil War. Richard Boone and Douglas Campbell star.

Teacher's Supplement

to

What We Know About "RACE"

by ASHLEY MONTAGU

Prepared by Gertrude Noar, national director of education, Anti-Defamation League of B'nai B'rith

What We Know About "Race" was written with the following objectives in mind:

- to give secondary school students the fundamental facts about race
- to correct widespread misinformation and superstitions
- to offer a foundation for positive intergroup attitudes on which to base a program of intergroup relations.

Superstition and misinformation about race is widespread. This condition must be corrected for it bears upon the problem of changing attitudes. Information alone, however, is not enough. Psychologists, sociologists, and educators agree that one of the best ways to change negative attitudes is to encourage interpersonal contact and acquaintance across group lines. Such contacts are most effective when the people involved have similar problems and work together to resolve them. Integrated classrooms are, therefore, of great value.

A unit of study* on race, based on this pamphlet and other relevant and appropriate materials, offers many opportunities for a heterogeneous group of pupils to work together. The unit will be most effective if the teacher plans it *with* his pupils. This will insure selection of the content, learning experiences, and materials most likely to be within the interest, abilities, and maturity levels of the students, and within the context of the community from which they come.

APPROACHES

Discovery of Attitudes:

The following activities are designed to help the teacher discover existing attitudes and stereotypes about racial groups. Only when these

* Basic reference on Unit Teaching Methods: Noar, Gertrude, "Teaching and Learning the Democratic Way," Englewood Cliffs, N.J.: Prentice-Hall, 1968.

are known, can he determine what learning experiences will be most useful in correcting misconceptions and in creating positive attitudes.

1. Use open-end questions for creative writing.*

A warm-up period in which the teacher tells his experiences and feelings and encourages pupils to tell theirs, is helpful. The teacher should develop a number of open-end sentences with the pupils and write them on the board. The students should be encouraged to write freely on any one of the statements, with the assurance that their compositions will be read only by the teacher.

Examples of open-end sentences are:

The following experience made me think about racial injustice.....

To my mind, races (or religions) should (should not) be segregated because.....

When I think about Negroes (or Chinese or Jews), I see.....

I am (am not) afraid of people whose skin is not white (white) because.....

I went to an intergroup party which turned out to be a bad (good) experience because.....

I am in favor (not in favor) of non-violent resistance because.....

2. Devise and administer a matching test, such as the following:

Choose one or more words from the list of characteristics on the right which to your mind most accurately describes each of the peoples listed on the left. (Some students may realize that stereotyping is involved and not valid, and may, therefore, say they cannot do this exercise.)

Peoples	Characteristics	
Caucasians	superior	stupid
Negroes	inferior	reserved
Chinese	cultured	aggressive
Mexicans	uncivilized	servile
Aryans	smart	undemocratic
Anglo-Saxons	educable	musical
Americans	democratic	indolent
French	artistic	energetic
Italians	educated	lazy
English	beautiful	industrious
	intelligent	

3. Use a social choice inventory in which pupils answer questions such as:

If you had a party, which groups of people (white, Negro,

* See *Diagnosing Human Relations Needs*, Taba, et al., Washington, D. C.: American Council on Education, 1951.

When answers to the questions have been formulated, the committee should present reports to the class.

Discuss what facts are needed to answer the committee's questions. Each member should tell how he will gather information and be encouraged to use the method most effective for him. Students who read with difficulty should search for pictures, diagrams, charts, and cartoons, and make use of radio and TV programs. Some should interview parents, adult friends, and teachers.

4. Conversation

Conversation circles of about ten students can be formed. These should contain a cross-section of racial and ethnic groups. Stimulating conversations can grow out of an exchange of personal experiences.

5. Resource persons, consultants and speakers

Informed and capable adults, willing to assist with school programs, can be found in every community. Questions with which the class wants help should be included in the invitations sent. Students should be prepared to introduce and thank speakers. Follow-up thank-you letters should be sent.

6. Trips

- To museums of natural science, for anthropological and biological information.
- To historical museums, for the facts of racial or ethnic group developments, contributions, and conflicts.
- To various business, industrial, and governmental centers, to investigate discriminatory practices and working and living conditions.

7. Interviews

Outstanding members of the community's racial and ethnic groups can be approached for interviews. They may be professional people, government officials, musicians, artists, authors, athletes, and community group leaders.

8. Audio-visual materials

- Assign relevant radio and TV programs as homework. Arrange to hear in the classroom, programs occurring during the day.
- Show films. (It is important that films be previewed, that the class be prepared for viewing and that there be follow-up discussion.
    - ABOUT PEOPLE. (35mm. filmstrip, 63 frames, color, silent.) Cartoon showing the origin of different peoples and the changes that result from environment. (All age levels.)

Oriental, Mexican), would you invite and which would you exclude?

Name three kinds of people (races) you would like to have in your neighborhood.

4. Present and discuss a film on housing, such as:
   - CRISIS IN LEVITTOWN, PA. (30 min., 16mm., black and white.)
     Dr. Dan Dodson of the N.Y.U. Center for Human Relations, interviews residents about their feelings and actions when a Negro family moves into the community. (Secondary school.)
   - WANTED — A PLACE TO LIVE. (15 min., 16mm., black and white.)
     This discussion film raises serious questions on the subject of minority group discrimination in housing, the solution of which is left to the audience. (Secondary school.)
   - THE STORY OF SAMMY LEE. (30 min., 16mm., black and white.)
     An Olympic swimming champion meets prejudice and discrimination when he tries to buy a home. (Secondary school.)
   - TO FIND A HOME. (28 min., 16mm., black and white.)
     Shows the experiences of two Negro families trying to rent apartments in a middle-sized northern city. (Secondary school.)

5. Discover the Extent of Misinformation and Information

Construct and administer a pre-test to find out what facts students know and which fallacies they hold to be true. The test can include short questions which require yes-no or single sentence answers, true-false, and completion statements. Samples of such sentences are:

Are all people of the same race the same color?

(T-F) The white race is superior to all others.

(T-F) Negroes have less mental ability than whites.

The races of mankind are ....., ..., ...

Negro blood is .... white blood.

LEARNING EXPERIENCES

1. Word study prior to use of *What We Know About "Race."*

It is essential that all pupils in a classroom read and understand *What We Know About "Race."* Since rates and levels vary greatly, vocabulary study should precede reading. In order to select and assign words for study on the basis of individual differences, the following technique is suggested.

- Ask pupils to scan the text and copy unfamiliar words into their notebooks. Dictionary work to secure meanings should follow.

- The most difficult words can be ascertained by asking the brightest pupils for their lists of unfamiliar words. Determine by a show of hands how many other pupils listed the same words, and write them on the board.
- The brightest pupils should be asked to look up these words at home and be prepared to teach them to the others the following day.
- All other pupils should work on their own lists at home. Encourage them to learn the meanings and usage of as many unfamiliar words as possible each night.
- Teams or small groups can have spelling drills at intervals during the unit.
- Add to the class list relevant words pupils want to know though they may not appear in the pamphlet.

2. Read the pamphlet

The pamphlet's contents can be organized under the following headings:

Concepts of race

Skin color

Relationship between race and intelligence

History of various races and ethnic groups in America (and elsewhere)

Theory and application of evolution to concepts of race

Effects of heredity and environment on race.

3. Organize committees

Committee work provides opportunities for association across group lines. The groups should be organized according to personal choice of associates or by teacher assignment. The teacher can then note where interracial or interethnic grouping takes place. Committees can be engaged in fact gathering (research) on those portions of the pamphlet that are of greatest interest to the group's members. For this purpose, the whole class can formulate questions raised by the pamphlet, such as:

- What theories of race have been advanced by other scientists?
- What is the theory of evolution? What are its implications?
- To what race do American Indians belong? What are their living conditions?
- What roles do heredity and environment play in the development of an individual? Of a race?

All the facts gathered by committee members should be pooled.

When answers to the questions have been formulated, the committee should present reports to the class.

Discuss what facts are needed to answer the committee's questions. Each member should tell how he will gather information and be encouraged to use the method most effective for him. Students who read with difficulty should search for pictures, diagrams, charts, and cartoons, and make use of radio and TV programs. Some should interview parents, adult friends, and teachers.

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- AMERICANS ALL. (16mm., 16 min., black and white.)
  Documentary film shows racial and religious antagonism in the United States and the role of well-meaning but misguided parents. Suggests ways of meeting the problem. (Secondary school.)
- BOUNDARY LINES. (16mm., 10 min., color.)
  Modern art and music intensify a dramatic cartoon picture showing the fallacy of artificial boundary lines separating people and nations. (Secondary school.)
- BROTHERHOOD OF MAN. (16mm., 10 min., color.)
  An animated cartoon which reveals the scientific facts of how people are essentially alike. (All age levels.)
- CAST THE FIRST STONE. (16mm., 42 min., black and white.)
  Negroes in Los Angeles and Chicago; Jews in Detroit; Puerto Ricans in New York; Mexicans, Japanese and Chinese in the Midwest describe their first-hand experiences with prejudice and discrimination. (Secondary school.)

EVALUATION

1. At the close of the unit, re-administer the tests and other devices that were used to discover the attitudes of students. By comparing the two results for each student, the teacher will see what change, if any, has taken place.
2. Keep anecdotal records of what individuals say and do during the course of the unit. Evaluate the changes in attitudes and actions.
3. Give a short-question test on facts about race.
4. Devise several essay questions for more able students to answer.

All materials listed may be obtained by writing to

ANTI-DEFAMATION LEAGUE
315 Lexington Avenue
New York 16, N. Y.